

## CLAIMS

1. Sensor for transmission measurement in a washing machine or dishwasher with:
  - 5       - a carrier (2, 104),
  - a transmitter (4, 106) attached to the carrier (2, 104) to emit a transmitter beam (8),
  - a receiver (6, 108) attached to the carrier (2, 104) to receive the beam generated by the transmitter (4, 106), and
  - 10       - a diaphragm system (12, 128) arranged on the carrier (2, 104) spaced from the transmitter (4, 106), with a transmitter diaphragm (14, 130) arranged in the beam path of the transmitter beam in
  - 15       order to generate a measurement beam (18) aligned to the receiver (6, 108).
  
2. Sensor for transmission measurement in a washing machine or dishwasher with:
  - 20       - a carrier (2, 104),
  - a transmitter (4, 106) attached to the carrier (2, 104) to emit a transmitter beam (8),
  - a receiver (6, 108) attached to the carrier (2, 104) to receive the beam generated by the transmitter (4, 106), and
  - 25       - a diaphragm system (12, 128) arranged on the carrier (2, 104) spaced from the receiver (6, 108) with a receiver diaphragm (16, 132) arranged in the beam path of the transmitter beam (8) to generate a
  - 30       reception beam aligned to the receiver (6, 108).
  
3. Sensor for transmission measurement in a washing machine or dishwasher with:

- a carrier (2, 104),  
- a transmitter (4, 106) attached to the carrier (2, 104) to emit a transmitter beam (8),  
- a receiver (6, 108) attached to the carrier (2, 104)  
5 to receive the beam generated by the transmitter (4, 106) and  
- a diaphragm system (12, 128) arranged on the carrier (2, 104) spaced from the transmitter (4, 106) and receiver (6, 108) with a transmitter  
10 diaphragm (14, 130) arranged in the beam path of the transmitter beam (8) to generate a measurement beam (18) and with a receiver diaphragm (16, 132) arranged in the beam path of the measurement beam (18) to generate a reception beam aligned to the  
15 receiver (6, 108).

4. Sensor according to any of the preceding claims in which the carrier (2, 104) has a first leg (114) on which the transmitter (4, 106) is arranged and a  
20 second leg (116) on which the receiver (6, 108) is arranged opposite the transmitter (4, 106).

5. Sensor according to claim 4, in which the legs (114, 116) of the carrier (2, 104) are of different lengths  
25 and on the free end (120) of the longer leg (116) of the carrier (2, 104) is arranged a temperature  
sensor (122).

6. Sensor according to any of claims 1 and 3 to 5, in  
30 which the diaphragm system has a first diaphragm system leg which holds the transmitter diaphragm (14, 130).

7. Sensor according to any of claims 2 to 6, in which the diaphragm system has a second diaphragm system leg which holds the first receiver diaphragm (16, 132).
- 5 8. Method for production of a sensor to measure the transmission of a fluid in a washing machine or a dishwasher with the following steps:
- provision of a carrier,
  - provision of a transmitter to emit a transmitter  
10 beam,
  - provision of a receiver to receive a reception beam,
  - provision of a diaphragm system with a transmitter diaphragm,
  - attachment of the transmitter and receiver on the  
15 carrier, and
  - arrangement of the diaphragm system on the carrier so that the diaphragm system is spaced from the transmitter and the transmitter diaphragm is arranged in the beam path of the transmitter beam in  
20 order to generate a measurement beam aligned to the receiver.
9. Method for production of a sensor to measure the transmission of a fluid in a washing machine or a  
25 dishwasher with the following steps:
- provision of a carrier,
  - provision of a transmitter to emit a transmitter  
beam,
  - provision of a receiver to receive a reception beam,
  - 30 - provision of a diaphragm system with a receiver diaphragm,
  - attachment of the transmitter and receiver on the carrier, and

- arrangement of the diaphragm system on the carrier so that the diaphragm system is spaced from the transmitter and the receiver diaphragm is arranged in the beam path of the transmitter beam in order to generate a reception beam aligned to the receiver.

10. Method for production of a sensor to measure the transmission of a fluid in a washing machine or a dishwasher with the following steps:

- provision of a carrier,
- provision of a transmitter to emit a transmitter beam,
- provision of a receiver to receive a reception beam,
- provision of a diaphragm system with a transmitter diaphragm and a receiver diaphragm,
- attachment of the transmitter and receiver on the carrier, and
- arrangement of the diaphragm system on the carrier so that the diaphragm system is spaced from the transmitter and the receiver, the transmitter diaphragm is arranged in the beam path of the transmitter beam in order to generate a measurement beam and the receiver diaphragm is arranged in the beam path of the measurement beam to generate a reception beam aligned to the receiver.